

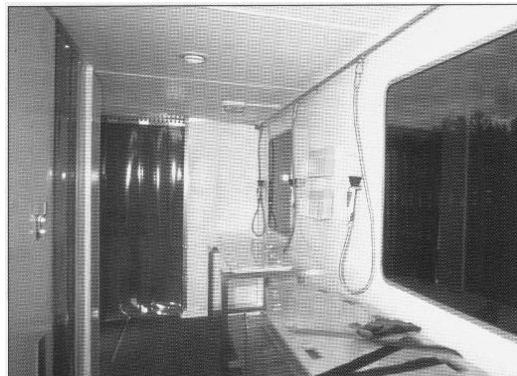
WORKING DRAFT

General

Equipment Name

ID# 25

Response and Decontamination Unit



Decontamination Process

Physical (removes contaminant) or Chemical (neutralizes contaminant)

Applications

Personnel

Equipment

Infrastructure

Yes

No

No

Application Notes

The Response and Decontamination Unit is a multi-purpose unit that is used to decontaminate skin and personal equipment that have become contaminated with chemical agents. The unit is commercially available in the U.S. The unit consists of a 6 m long trailer that is equipped with a water heater and two showers for individuals. The shower area is large enough to accommodate walking personnel as well as victims on stretchers.

Availability

Commercially available

Current User

Not specified

Manufacturer

Hughes Safety Showers USA
115 N. Lee St. Suite 502
Alexandria, VA 22314
703-836-7486 (Tel)
703-836-8090 (Fax)
email: hoyas1@erols.com

Source

Wide Area Decon: CB Decontamination Technologies, Equipment, and Projects, 22 March 1999 (U.S. Joint Service Material Group)

Operational Parameters

CW Agents Decontaminated

Not specified

BW Agents Decontaminated

Not specified

**High Hazard TIMs
Decontaminated**

Not specified

**Medium Hazard TIMs
Decontaminated**

Not specified

**Low Hazard TIMs
Decontaminated**

Not specified

Decontaminant Solutions

Not specified

WORKING DRAFT

Capacity/Throughput

Not specified

Set-up Time

Not specified

Physical Parameters

Size

19.68 L trailer (ft)

Weight

Not specified

Power Requirements

240 V, 2.2 kVA generator

Logistical Parameters

Consumables Required

Not specified

Maintenance Repairs Required

Not specified

Shelf Life

Not specified

Transportability

Not specified

Durability

Not specified

Environmental Conditions

Not specified

Environmental Considerations

Not specified

Resources

Not specified

Unit Cost

Not specified

Maintenance Cost

Not specified

Warranty

Not specified

Special Requirements

Operator Skills Required

Not specified

Operator Training Required

Not specified

Training Available

Not specified

Manuals Available

Not specified

Support Equipment

Not specified

Testing Information

Information not available

Applicable Regulations

Not specified

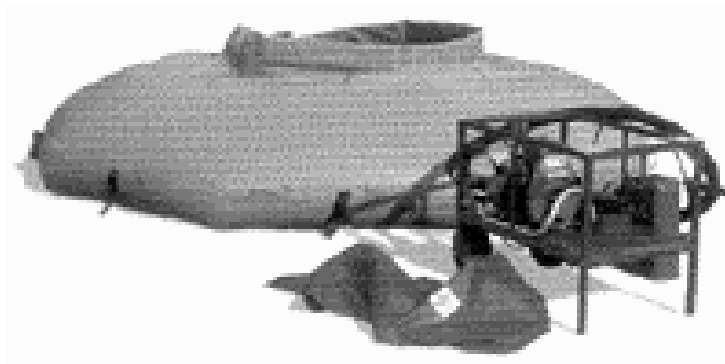
WORKING DRAFT

General

Equipment Name

ID# 26

Blast Guard



Decontamination Process

Physical (removes contaminant) and/or Chemical (neutralizes contaminant)

Applications

Personnel

No

Equipment

Yes

Infrastructure

Yes

Application Notes

The Blast Guard dispersion suppressive foam system can be configured to include a tent, mixer and pump, and reservoir. The system is used to contain an improvised Explosive Device (IED) with a chemical or biological add-on. The foam system renders most forms of improvised explosive, chemical and biological devices, as well as dispersal devices, safe, and prevents the escape or any aerosol hazard. The tent is used to contain fragments from typical briefcase sized bombs containing up to 1 kg of explosive. It can be used to mitigate explosions and to protect against any explosion or dispersal when using a render safe procedure, including robotic deployment, providing time to evacuate an area with minimal risk before EOD personnel start investigating the device. The system may be deployed inside a building or outside. The tent is made from three layers of ballistic material, and has a rapid opening, one-pieced zippered door and large bottom opening. Water is pumped to the mixer where the surfactant GC3 and the decontaminant are added. Operationally, equipment requires a water flow rate setting and foam flow rate setting. Digital readout is part of the equipment. Tent filling takes approximately 1 min and because the foam is nontoxic, the operator is not at risk.

Availability

In production now. On market since 1999

Current User

Australian Army

Manufacturer

Irvin Aerospace Canada Ltd.
POC: Mr. Doug Eaton
479 Central Avenue, P.O. Box 280
Ft. Erie, Ontario, Canada L2A 5M9
905-871-6510 (Tel)

Developed under Canadian Government license with support from USA

Source

Irvin Aerospace Canada Ltd.

WORKING DRAFT

Operational Parameters

CW Agents Decontaminated

G, V, agents; H, L vesicants

BW Agents Decontaminated

Demonstrated performance against all known biological agents

High Hazard TIMs

Ongoing program

Decontaminated

Medium Hazard TIMs

Ongoing program

Decontaminated

Low Hazard TIMs

Ongoing program

Decontaminated

Decontaminant Solutions

CASCAD contains a proprietary foaming and decontamination material (biodegradable and nonflammable). It is mixed on demand on site using either a fresh or salt-water source. CASCADE chemical formula is available from Irvin Aerospace Canada Ltd.

Capacity/Throughput

Not applicable

Set-up Time

Easy to use. Quick connects on all hose fittings. Tent can be assembled in 60 s and system operational in 5 min depending upon water source.

Physical Parameters

Size

Dependant upon configuration but will be minimally 42 in long x 27 in wide x 37 in high

Weight

Tent - 30 lb; system - 450 lb at a minimum

Power Requirements

12 V dc power (battery provided) plus water pump (if not specified)

Logistical Parameters

Consumables Required

Water (salt, fresh, gray or potable); chemical reagents and surfactant; bomb tent

Maintenance Repairs Required

Routine maintenance and operator training

Shelf Life

Tent and mechanical equipment is 5 yr currently. Chemicals are 2 yr currently.

Transportability

Can be transported in large SUV or similar.

Durability

Ruggedized commercial equipment

Environmental Conditions

Operates in common environmental conditions down to 41 °F (requires special procedures below 41 °F)

Environmental Considerations

Waste disposal

Resources

2 man to 3 man per team (minimum); tent can be maneuvered by 1 man or can be delivered robotically

Unit Cost

\$87.8K, approximately; depends on configuration

Maintenance Cost

Depends on configuration

WORKING DRAFT

Warranty

1 yr or 2 yr depending on configuration

Special Requirements**Operator Skills Required**

Competent bomb squad technician

Operator Training Required

40 h

Training Available

Full operator and trainer

Manuals Available

User manuals, training guidelines

Support Equipment

Depends upon equipment configuration.
Blast Guard, tent, mixer and pump, and reservoir.

Testing Information

Available from Irvin Aerospace Canada Ltd.

Applicable Regulations

None known

WORKING DRAFT

General

Equipment Name

First Responder's Blast Guard

ID# 27

Picture Not Available

Decontamination Process

Physical (removes contaminant) and/or Chemical (neutralizes contaminant)

Applications

Personnel

Equipment

Infrastructure

No

Yes

Yes

Application Notes

Bomb containment tent using an aqueous foam containing reactive chemistry ingredients. To contain an improvised Explosive Device (IED) with a chemical or biological add-on. The system may be deployed inside a building or outside. The system is typically used to contain the IED contents under a controlled explosion and prevent the escape or any aerosol hazard. It may also be used to contain fragments from typical briefcase sized bombs containing up to 1 kg of explosive. Operationally, calibration required for foam calculation and surfactant volume measurement.

Availability

Commercial; in production 2000

Current User

Early version used by RCMP in Canada

Manufacturer

Irvin Aerospace Canada Ltd.
POC: Mr. Doug Eaton
479 Central Avenue, P.O. Box 280
Ft. Erie, Ontario, Canada L2A 5M9
905-871-6510 (Tel)

Developed under Canadian Government license with support from RCMP

Source

Irvin Aerospace Canada Ltd.

Operational Parameters

CW Agents Decontaminated

G, V, agents; H, L vesicants

BW Agents Decontaminated

Demonstrated performance against all known biological agents

High Hazard TIMs Decontaminated

Ongoing program

Medium Hazard TIMs Decontaminated

Ongoing program

Low Hazard TIMs Decontaminated

Ongoing program

WORKING DRAFT

Decontaminant Solutions

CASCAD contains a proprietary foaming and decontamination material (biodegradable and nonflammable). It is mixed on demand on site using either a fresh or salt-water source. CASCADE chemical formula is available from Irvin Aerospace Canada Ltd.

Capacity/Throughput

Not applicable

Set-up Time

Easy to use. Quick connects on all hose fittings. Tent can be assembled in 60 s and system operational in 5 min depending upon water source.

Physical Parameters

Size

Package under development

Weight

350 lb at a minimum

Power Requirements

Compressed air bottle(s)

Logistical Parameters

Consumables Required

Water (salt, fresh, gray or potable); chemical reagents and surfactant; bomb tent

Maintenance Repairs Required

Routine maintenance and operator training

Shelf Life

Tent and mechanical equipment is 5 yr currently. Chemicals are 2 yr currently.

Transportability

Can be transported in large SUV or similar.

Durability

Ruggedized commercial equipment

Environmental Conditions

Operates in common environmental conditions down to 41 °F (requires special procedures below 41 °F)

Environmental Considerations

Waste disposal

Resources

2 man per team

Unit Cost

Cheaper, less capable system based on Blast Guard

Maintenance Cost

Depends on configuration

Warranty

1 yr or 2 yr depending on configuration

Special Requirements

Operator Skills Required

Competent bomb squad technician

Operator Training Required

40 h

Training Available

Full operator and trainer

Manuals Available

User manuals, training guidelines

Support Equipment

Depends upon equipment configuration

Testing Information

Available from Irvin Aerospace Canada Ltd.

Applicable Regulations

As applicable to compressed air cylinders

WORKING DRAFT

General

Equipment Name

First Responder's Surface Decon Unit

ID# 28

Picture Not Available

Decontamination Process

Physical (removes contaminant) and/or Chemical (neutralizes contaminant)

Applications

Personnel

Equipment

Infrastructure

No

Yes

No

Application Notes

Used to thoroughly decontaminate all nonsensitive equipment. Can be used inside or outside. Full IPE required. Operationally, equipment requires a water flow rate setting and a foam flow rate setting. Digital readout part of equipment.

Availability

Commercial; in production 2000

Current User

Under development

Manufacturer

Irvin Aerospace Canada Ltd.
POC: Mr. Doug Eaton
479 Central Avenue
P.O. Box 280
Ft. Erie, Ontario, Canada L2A 5M9
905-871-6510 (Tel)

Source

Developed under Canadian Government license
Irvin Aerospace Canada Ltd.

Operational Parameters

CW Agents Decontaminated

G, V, agents; H, L vesicants

BW Agents Decontaminated

Demonstrated performance against all known biological agents

High Hazard TIMs Decontaminated

Under study

Medium Hazard TIMs Decontaminated

Under study

Low Hazard TIMs Decontaminated

Under study

Decontaminant Solutions

CASCAD contains a proprietary foaming and decontamination material (biodegradable and nonflammable). It is mixed on demand on site using either a fresh or salt-water source. CASCADE chemical formula is available from Irvin Aerospace Canada Ltd.

WORKING DRAFT

Capacity/Throughput 10 vehicles per load minimum (depending upon configuration)

Set-up Time Easy to use. Quick connects on all hose fittings. System operational in 5 min depending on water source.

Physical Parameters

Size Configuration dependant but will be minimally
36 L x 18 W x 24 H (in)

Weight 350 lb at a minimum

Power Requirements 12 V dc power (battery provided) plus water pump (if not specified)

Logistical Parameters

Consumables Required Water (salt, fresh, gray or potable); chemical reagents

Maintenance Repairs Required Routine maintenance and operator training

Shelf Life Tent and mechanical equipment is 5 yr currently. Chemicals are 2 yr currently.

Transportability Can be transported in large SUV or similar.

Durability Ruggedized commercial equipment

Environmental Conditions Operates in common civilian environments

Environmental Considerations Waste disposal

Resources 2 man per team (minimum)

Unit Cost Under development. (Will be cheaper, less capable version of Blast Guard equipment)

Maintenance Cost Under development

Warranty 1 yr or 2 yr depending on configuration

Special Requirements

Operator Skills Required Minimum training

Operator Training Required 8 h

Training Available Full operator and trainer

Manuals Available User manuals, training guidelines

Support Equipment Water pump or fire truck

Testing Information Available from Irvin Aerospace Canada Ltd.

Applicable Regulations None known

WORKING DRAFT

General

Equipment Name

ID# 29

CASCAD



Decontamination Process

Physical (removes contaminant) and/or Chemical (neutralizes contaminant)

Applications

Personnel

No

Equipment

Yes

Infrastructure

No

Application Notes

Used to thoroughly decontaminate all nonsensitive equipment (can be used inside or outside). Full IPE required. It is an aqueous biodegradable/nonflammable foam designed to contain and eliminate chemical and biological agents, and for removing radioactive particle contamination. CASCAD surrounds a suspected CB agent contamination site and then removes and destroys any agents present. It is mixed on demand on site using either a fresh or salt-water source. For surface decontamination, the foam is easily applied, rapidly covers large areas, and sticks to vertical surfaces. Foam also has fire suppression properties and can be used as a fire fighting foam.

Availability

Commercially available

Current User

Australian Army, Tech. Escort group and Rest Ops group in USA

Manufacturer

Irvin Aerospace Canada Ltd.
POC: Mr. Doug Eaton
479 Central Avenue, P.O. Box 280
Ft. Erie, Ontario, Canada L2A 5M9
905-871-6510 (Tel)

Source

Irvin Aerospace Canada Ltd.

Operational Parameters

CW Agents Decontaminated

G, V, agents; H, L vesicants

BW Agents Decontaminated

All (agents not specified)

**High Hazard TIMs
Decontaminated**

Ongoing program

**Medium Hazard TIMs
Decontaminated**

Ongoing program

**Low Hazard TIMs
Decontaminated**

Ongoing program

WORKING DRAFT

Decontaminant Solutions

CASCAD contains a proprietary foaming and decontamination material (biodegradable and nonflammable). It is mixed on demand on site using either a fresh or salt-water source. CASCADE chemical formula is available from Irvin Aerospace Canada Ltd.

Capacity/Throughput

Decontaminates 100 vehicles per hour (minimum)

Set-up Time

Easy to use. Quick connects on all hose fittings. Tent can be assembled in 60 s and system operational in 5 min depending upon water source.

Physical Parameters

Size

42 L x 27 W x 37 H (in) minimum

Weight

600 lb

Power Requirements

12 V dc power (battery provided) plus water pump (if not specified)

Logistical Parameters

Consumables Required

Water, (salt, fresh, gray or potable);
chemical reagents

Maintenance Repairs Required

Routine maintenance and operator training

Shelf Life

Tent and mechanical equipment is 5 yr currently. Chemicals are 2 yr currently.

Transportability

Can be transported in large SUV or similar.

Durability

Ruggedized commercial equipment

Environmental Conditions

Operates in common military environments

Environmental Considerations

Waste disposal

Resources

2 man or 3 man per team (minimum)

Unit Cost

Depends on configuration. Refer to Irvin Aerospace Canada for prices.

Maintenance Cost

Depends on configuration

Warranty

1 yr or 2 yr depending on configuration

Special Requirements

Operator Skills Required

Minimal

Operator Training Required

8 h of training is required to operate the equipment

Training Available

Full operator and trainer

Manuals Available

User manuals, training guidelines

Support Equipment

Depends upon equipment configuration

Testing Information

Available from Irvin Aerospace Canada Ltd. Canadian Forces and French Government testing demonstrated CASCAD as an effective method in removing radioactive contaminated dust from surfaces and controlling the dust.

Applicable Regulations

None known

WORKING DRAFT

General

Equipment Name

COLPRO

ID# 30

Picture Not Available

Decontamination Process

Physical (removes contaminant) and/or Chemical (neutralizes contaminant)

Applications

Personnel

Equipment

Infrastructure

Yes

Yes

No

Application Notes

Use in any contaminated area and personnel decontamination

Availability

In production since 2000

Current User

Earlier version in use by Canadian Department of National Defense

Manufacturer

Irvin Aerospace Canada Ltd.
POC: Mr. Doug Eaton
479 Central Avenue, P.O. Box 280
Ft. Erie, Ontario, Canada L2A 5M9
905-871-6510 (Tel)
Irvin Aerospace Canada Ltd.

Source

Operational Parameters

CW Agents Decontaminated

All known military chemical agents

BW Agents Decontaminated

Under study

High Hazard TIMs

Under study

Decontaminated

Medium Hazard TIMs

Under study

Decontaminated

Low Hazard TIMs

Under study

Decontaminated

Decontaminant Solutions

Aqueous foam containing reactive chemistry ingredients

Capacity/Throughput

100 walking per hour

Set-up Time

Can be erected in 45 min with operators using protective gear

Physical Parameters

Size

Dependant upon configuration

Weight

Dependant upon configuration

Power Requirements

110 / 200 V, 60 Hz

WORKING DRAFT

Logistical Parameters

Consumables Required

Filters
Decontaminant
Reactive Skin Decontamination Lotion (RSDL)
as required to decontaminate affected skin areas

Maintenance Repairs Required

Routine maintenance and operator training

Shelf Life

Tent and mechanical equipment is 5 yr currently; chemicals are 2 yr currently

Transportability

Can be transported by truck, container or palletized for trailer use; ruggedized equipment

Durability

Ruggedized commercial equipment

Environmental Conditions

Operates in common military environments

Environmental Considerations

Waste disposal

Resources

4 man team (minimum)

Unit Cost

Depends on configuration. Refer to Irvin Aerospace Canada for prices.

Maintenance Cost

Depends on configuration

Warranty

1 yr

Special Requirements

Operator Skills Required

Competent NBC training

Operator Training Required

8 h of training is required to operate the equipment

Training Available

Full operator and trainer

Manuals Available

User manuals, training guidelines

Support Equipment

Generator 10 kVA (Also available from Irvin Aerospace Canada)

Testing Information

Available from Irvin Aerospace Canada Ltd.

Applicable Regulations

None known

WORKING DRAFT

General

Equipment Name

Decon System for Sensitive Materials (DSSM)

ID# 31

Picture Not Available

Decontamination Process

Chemical (neutralizes contaminant) Deradiation, Disinfection, and Detoxification

Applications

Personnel

Equipment

Infrastructure

Yes

Yes

No

Application Notes

The system decontaminates vehicle interiors, optical equipment, electronic equipment, personal weapons, and individual PPE equipment by deradiation, disinfection, and detoxification.

Availability

Commercially available

Current User

Federal German Armed Forces

Manufacturer

KARCHER

Alfred Karcher Gmbh & Company

Alfred-Karcher-Strasse 28-40

Winnenden, Germany D-71364

+49-7195-142262 (Tel)

+49-7195-142780 (Fax)

email: hans-joachim.toepfer@de.kaercher.com

U.S. Agent: Life Safety Systems

343 Soquel Avenue, Suite 317

Santa Cruz, CA 95062

POC: Bill Conklin

831-728-9090 (Tel)

831-429-2224 (Tel)

info@lifesafetysys.com

Source

KARCHER/U.S. Agent: Life Safety Systems

Operational Parameters

CW Agents Decontaminated

Known theater agents

BW Agents Decontaminated

Known theater agents

High Hazard TIMs

Not specified

Decontaminated

Medium Hazard TIMs

Not specified

Decontaminated

Low Hazard TIMs

Not specified

Decontaminated

WORKING DRAFT

Decontaminant Solutions	Not specified
Capacity/Throughput	Not specified
Set-up Time	Not specified

Physical Parameters

Size	Not specified
Weight	Not specified
Power Requirements	Self contained diesel generator with 3 h run time per tank.

Logistical Parameters

Consumables Required	Water decontaminant
Maintenance Repairs Required	Monthly test
Shelf Life	10 yr plus
Transportability	Wheeled trailer assembly requires tractor rig to tow to site
Durability	Built to military specifications
Environmental Conditions	Operates in most climate conditions
Environmental Considerations	Protect from freezing
Resources	2 man to 3 man crew required
Unit Cost	Not specified
Maintenance Cost	Not specified
Warranty	Not specified

Special Requirements

Operator Skills Required	Advanced training required
Operator Training Required	40 h of training required to operate equipment
Training Available	Yes, on site
Manuals Available	User manuals
Support Equipment	Tractor rig to tow trailer unit to decon site
Testing Information	Test data available upon request
Applicable Regulations	Not specified

WORKING DRAFT

General

Equipment Name

Field Shower System

ID# 32

Picture Not Available

Decontamination Process

Physical (removes contaminant)

Applications

Personnel

Equipment

Infrastructure

Yes

No

No

Application Notes

Allows 2 persons to shower with or without decontamination agents

Availability

Commercially available

Current User

Various military and civil defense organizations

Manufacturer

KARCHER

Alfred Karcher Gmbh & Company

Alfred-Karcher-Strasse 28-40

Winnenden, Germany D-71364

+49-7195-142262 (Tel)

+49-7195-142780 (Fax)

email: hans-joachim.toepfer@de.kaercher.com

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info@lifesafetysys.com

Source

KAR0CHER/U.S. Agent: Life Safety Systems

Operational Parameters

CW Agents Decontaminated

Known theater agents

BW Agents Decontaminated

Known theater agents

High Hazard TIMs

Not specified

Decontaminated

Medium Hazard TIMs

Not specified

Decontaminated

Low Hazard TIMs

Not specified

Decontaminated

Decontaminant Solutions

Not specified

Capacity/Throughput

Not specified

WORKING DRAFT

Set-up Time 30 min

Physical Parameters

Size 6.5 ft

Weight 119 lb

Power Requirements None

Logistical Parameters

Consumables Required Water decontaminant

Maintenance Repairs Required Inspect hoses every 6 mo

Shelf Life Indefinite

Transportability Easily transported, light transport vehicle

Durability Constructed of stainless steel, built to military specifications

Environmental Conditions Works in most climates, must be protected from freezing conditions

Environmental Considerations Protect from freezing

Resources 1 person to operate

Unit Cost \$3.5K

Maintenance Cost Not specified

Warranty Not specified

Special Requirements

Operator Skills Required Basic assembly skills

Operator Training Required 2 h of training is required to operate equipment

Training Available Yes, on site

Manuals Available User manuals

Support Equipment Not specified

Testing Information Test data available upon request

Applicable Regulations Not specified

WORKING DRAFT

General

Equipment Name

ID# 33

Karcher Decojet-Trailer Decontamination System



Decontamination Process

Physical (removes contaminant)

Applications

Personnel

Yes

Equipment

Yes

Infrastructure

Yes

Application Notes

The Decojet-Trailer is a mobile decontamination system used to decontaminate personal equipment, exterior equipment, and large areas. The system is currently in service in Australia, Austria, and Portugal. The decontaminant employed is dispersed at high-pressures. The Decojet-Trailer carries all necessary decontamination chemicals, as well as 1000 L of water, to allow for a limited degree of independent operation. The Decojet-Trailer is equipped with attached pumps, which extract water from sources (i.e., rivers, streams) up to a maximum suction height of 5 m. The system also carries dry steam generators for further decon of contaminated materials.

Availability

Commercially available

Current User

In service in Australia, Austria, and Portugal

Manufacturer

KARCHER
Alfred Karcher Gmbh & Company
Alfred-Karcher-Strasse 28-40
Winnenden, Germany D-71364
+49-7195-142262 (Tel)
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email: hans-joachim.toepfer@de.kaercher.com

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831-728-9090 (Tel)
831-429-2224 (Tel)
info@lifesafetysys.com

Source

Wide Area Decon: CB Decontamination Technologies, Equipment, and Projects, 22 March 1999 (U.S. Joint Service Material Group)

WORKING DRAFT

Operational Parameters

CW Agents Decontaminated	GB, VX, HD
BW Agents Decontaminated	All
High Hazard TIMs Decontaminated	Not specified
Medium Hazard TIMs Decontaminated	Not specified
Low Hazard TIMs Decontaminated	Not
Decontaminant Solutions	Water
Capacity/Throughput	Decontaminates 150 personnel/hour and 15 to 20 sets of personal equipment per hour
Set-up Time	Not specified

Physical Parameters

Size	16.92 L x 8.03 W x 8.07 H (ft)
Weight	6600 lb
Power Requirements	Not specified

Logistical Parameters

Consumables Required	Decontaminant
Maintenance Repairs Required	Information not available
Shelf Life	Not specified
Transportability	Mobile decontamination unit trailer system
Durability	Built to military specifications
Environmental Conditions	All climate operation
Environmental Considerations	Protect from freezing
Resources	Not specified
Unit Cost	Not specified
Maintenance Cost	Not specified
Warranty	Not specified

Special Requirements

Operator Skills Required	Technical skills required
Operator Training Required	40 h
Training Available	Yes, on site
Manuals Available	Training manuals
Support Equipment	Medium transport vehicle for towing, water source
Testing Information	Information not available
Applicable Regulations	Not specified

WORKING DRAFT

General

Equipment Name

Mediclean

ID# 34

Picture Not Available

Decontamination Process

Physical (removes contaminant) and/or Chemical (neutralizes contaminant)

Applications

Personnel

Equipment

Infrastructure

Yes

No

No

Application Notes

This system was developed for the decontamination of persons who have come into contact with chemical, biological agents or radioactive fall-out. Used to clean exposed skin and wound tissues.

Availability

Commercially available

Current User

Various military and civil defense organizations

Manufacturer

KARCHER

Alfred Karcher Gmbh & Company

Alfred-Karcher-Strasse 28-40

Winnenden, Germany D-71364

+49-7195-142262 (Tel)

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U.S. Agent: Life Safety Systems

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info@lifesafetysys.com)

Source

KARCHER/U.S. Agent: Life Safety Systems

Operational Parameters

CW Agents Decontaminated

Known theater agents

BW Agents Decontaminated

Known theater agents

High Hazard TIMs

Not specified

Decontaminated

Medium Hazard TIMs

Not specified

Decontaminated

Low Hazard TIMs

Not specified

Decontaminated

WORKING DRAFT

Decontaminant Solutions	Not specified
Capacity/Throughput	Dependent on individual requirement for victim decontamination
Set-up Time	Under 30 min
<u>Physical Parameters</u>	
Size	2.2 ft x 1.7 ft x 2.3 ft
Weight	88.5 lb
Power Requirements	Not specified
<u>Logistical Parameters</u>	
Consumables Required	Water decontaminant
Maintenance Repairs Required	Quarterly start-up is required
Shelf Life	Indefinite
Transportability	Easily transported
Durability	Built to military specifications
Environmental Conditions	Operates in most climate conditions
Environmental Considerations	None
Resources	1 person to operate
Unit Cost	\$6K
Maintenance Cost	Not specified
Warranty	Not specified
<u>Special Requirements</u>	
Operator Skills Required	Basic medical skills
Operator Training Required	5 h to 8 h of training is required to operate equipment
Training Available	Yes, on site
Manuals Available	User manuals
Support Equipment	None
Testing Information	Test data available upon request
Applicable Regulations	Not specified

WORKING DRAFT

General

Equipment Name

Mobile Environmental Protection Container

ID# 35

Picture Not Available

Decontamination Process

Physical (removes contaminant)

Applications

Personnel

Equipment

Infrastructure

Yes

Yes

No

Application Notes

Information not available

Availability

Commercially available

Current User

Various military and civil defense organizations

Manufacturer

KARCHER

Alfred Karcher Gmbh & Company

Alfred-Karcher-Strasse 28-40

Winnenden, Germany D-71364

+49-7195-142262 (Tel)

+49-7195-142780 (Fax)

email: hans-joachim.toepfer@de.kaercher.com

U.S. Agent: Life Safety Systems

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info@lifesafetysys.com

Source

KARCHER/U.S. Agent: Life Safety Systems

Operational Parameters

CW Agents Decontaminated

Known theater agents

BW Agents Decontaminated

Known theater agents

High Hazard TIMs

Not specified

Decontaminated

Medium Hazard TIMs

Not specified

Decontaminated

Low Hazard TIMs

Not specified

Decontaminated

Decontaminant Solutions

Not specified

WORKING DRAFT

Capacity/Throughput	20 persons per hour, up to 4 to 8 vehicles per hour, or 4 to 8 sets of decon clothing and materials
Set-up Time	Not specified
<u>Physical Parameters</u>	
Size	Not specified
Weight	5000 lb
Power Requirements	On board generator
<u>Logistical Parameters</u>	
Consumables Required	Decontaminant
Maintenance Repairs Required	Quarterly start-up is required
Shelf Life	10 yr to 20 yr
Transportability	A vehicle is required to move equipment to site
Durability	Built to military specifications
Environmental Conditions	Operates under most climate conditions
Environmental Considerations	None
Resources	2 person crew required
Unit Cost	Not specified
Maintenance Cost	Not specified
Warranty	Not specified
<u>Special Requirements</u>	
Operator Skills Required	Advanced decontamination skills
Operator Training Required	5 d of training is required to operate equipment
Training Available	Yes, on site
Manuals Available	User manuals
Support Equipment	Not specified
Testing Information	Test data available upon request
Applicable Regulations	Not specified

WORKING DRAFT

General

Equipment Name

ID# 36

Karcher DT60 Decontamination Tent



Decontamination Process

Physical (removes contaminant)

Applications

Personnel

Yes

Equipment

Yes

Infrastructure

No

Application Notes

The DT60 Decontamination Tent is designed to decontaminate skin and personal equipment. The tent is currently in service with the Portuguese Air Force. The double-walled tent is supported by an inflatable tubular frame, which is inflated using an included frame-mounted compressor. Should the tent undergo any loss in pressure, the compressor will re-inflate the supporting tubes automatically. Two people can erect the DT60 in approximately 5 min and personnel enter the tent through a zip-fastened entrance flap. The width of the entrance is 1.5 m and the height of the entrance is 2 m. Commercially available

Availability

Current User

In service with the Portuguese Air Force

Manufacturer

KARCHER

Alfred Karcher Gmbh & Company

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Source

Wide Area Decon: CB Decontamination Technologies, Equipment, and Projects, 22 March 1999 (U.S. Joint Service Material Group)

Operational Parameters

CW Agents Decontaminated

GB, VX, HD

BW Agents Decontaminated

All

WORKING DRAFT

High Hazard TIMs Decontaminated	Not specified
Medium Hazard TIMs Decontaminated	Not specified
Low Hazard TIMs Decontaminated	Not specified
Decontaminant Solutions	Water
Capacity/Throughput	Decontaminates 60 sets of clothing and equipment per hour
Set-up Time	5 min

Physical Parameters

Size	7.2 L x 7.75 W x 7.8 H (ft)
Weight	94 lb
Power Requirements	Not specified

Logistical Parameters

Consumables Required	Decontaminant, water
Maintenance Repairs Required	Not specified
Shelf Life	Not specified
Transportability	Light transport required
Durability	Not specified
Environmental Conditions	The outside of the tent has a temperature resistance ranging from –22 °F to +176 °F, while the inside of the tent has a temperature resistance ranging from –22 °F to +284 °F.
Environmental Considerations	Not specified
Resources	Two people to erect
Unit Cost	\$7.8K
Maintenance Cost	Not specified
Warranty	Not specified

Special Requirements

Operator Skills Required	Basic assembly skills
Operator Training Required	8 h
Training Available	Yes, on site
Manuals Available	Training manuals
Support Equipment	Light transport vehicle
Testing Information	Information not available
Applicable Regulations	Not specified

WORKING DRAFT

General

Equipment Name

Karcher SCS 1200 DE Lightweight Decontamination System

ID# 37



Decontamination Process

Physical (removes contaminant)

Applications

Personnel

Yes

Equipment

Yes

Infrastructure

No

Application Notes

The SCS 1200 DE is a lightweight decontamination system designed to decontaminate skin and personal equipment, and exterior equipment (i.e., tracked and wheeled vehicles, aircraft).

Availability

Commercially available

Current User

In service within Africa, Europe, and the USA

Manufacturer

KARCHER

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Source

Wide Area Decon: CB Decontamination Technologies, Equipment, and Projects, 22 March 1999 (U.S. Joint Service Material Group)

Operational Parameters

CW Agents Decontaminated

Known theater agents

BW Agents Decontaminated

Known theater agents

High Hazard TIMs

Not specified

Decontaminated

Medium Hazard TIMs

Not specified

Decontaminated

WORKING DRAFT

Low Hazard TIMs	Not specified
Decontaminated	
Decontaminant Solutions	Not specified
Capacity/Throughput	Dispenses 450 L to 1200 L of decontaminant/hour
Set-up Time	Not specified

Physical Parameters

Size	3.60 L x 2.46 W x 2.46 H (ft)
Weight	407 lb
Power Requirements	8.5 hp diesel engine

Logistical Parameters

Consumables Required	Decontaminant
Maintenance Repairs Required	Monthly test
Shelf Life	Not specified
Transportability	Portable Decontamination Unit
Durability	Built to military specifications
Environmental Conditions	All climate operation
Environmental Considerations	Protect from freezing
Resources	One person to operate
Unit Cost	Not specified
Maintenance Cost	Not specified
Warranty	Not specified

Special Requirements

Operator Skills Required	Basic operator skills
Operator Training Required	8 h
Training Available	Yes, on site
Manuals Available	Training manuals
Support Equipment	Light transport vehicle
Testing Information	Information not available
Applicable Regulations	Not specified

WORKING DRAFT

General

Equipment Name

Karcher HDS 1200 EK High-Pressure Steam Jet Cleaner Unit

ID# 38



Decontamination Process

Physical (removes contaminant) and Chemical (neutralizes contaminant)

Applications

Personnel

No

Equipment

Yes

Infrastructure

No

Application Notes

The HDS 1200 EK is a high-pressure steam jet cleaner unit used for a variety of decontamination tasks. This system, in service with the German armed forces, employs mechanical technology and disseminates high-pressure cold or hot water, steam, or dry steam to decon contaminated materials. The system utilizes a high-pressure pump (up to 50 bar) capable of raising water up to 5 m from streams and rivers. All system components are mounted on skids with fold-down wheels.

Availability

Commercially available

Current User

In service with the German armed forces

Manufacturer

KARCHER

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Source

Wide Area Decon: CB Decontamination Technologies, Equipment, and Projects, 22 March 1999 (U.S. Joint Service Material Group)

Operational Parameters

CW Agents Decontaminated

GB, VX, HD

BW Agents Decontaminated

All

WORKING DRAFT

High Hazard TIMs Decontaminated	Not specified
Medium Hazard TIMs Decontaminated	Not specified
Low Hazard TIMs Decontaminated	Not specified
Decontaminant Solutions	Water, TDE202 (detoxification emulsion)
Capacity/Throughput	Not specified
Set-up Time	Not specified

Physical Parameters

Size	4.75 L x 2.46 W x 3.64 H (ft)
Weight	616 lb
Power Requirements	Not specified

Logistical Parameters

Consumables Required	Decontaminant, water
Maintenance Repairs Required	Not specified
Shelf Life	Not specified
Transportability	Light transport vehicle
Durability	Built to military specifications
Environmental Conditions	All climate operation
Environmental Considerations	Protect from freezing
Resources	Not specified
Unit Cost	Not specified
Maintenance Cost	Not specified
Warranty	Not specified

Special Requirements

Operator Skills Required	Basic operator skills
Operator Training Required	8 h
Training Available	Yes, on site
Manuals Available	Training manuals
Support Equipment	Light transport vehicle
Testing Information	Information not available
Applicable Regulations	Not specified

WORKING DRAFT

General

Equipment Name

ID# 39

Karcher Decont Jet 21



Decontamination Process

Physical (removes contaminant) and Chemical (neutralizes contaminant)

Applications

Personnel

No

Equipment

Yes

Infrastructure

No

Application Notes

The Decont Jet 21 is designed to decontaminate exterior equipment. The system employs mechanical technology and disseminates water at high-pressures. The Decont Jet 21 is comprised of two sub-systems, a high-pressure water spray stem and a gas turbine for decontamination with hot gas. Both sub-systems are mounted on a semi-trailer mobile platform. The frame is held by a hydraulic crane and is equipped with high-pressure rotating nozzles and guidance arrangements for the hot gases. The system's telescopic design allows the decontamination of any size vehicle and large areas of terrain. The system is equipped with a water tank capacity of 6000 L and a fuel consumption rate of 870 L/h.

Availability

Commercially available

Current User

Federal German Armed Forces

Manufacturer

KARCHER

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Source

Wide Area Decon: CB Decontamination Technologies, Equipment, and Projects, 22 March 1999 (U.S. Joint Service Material Group)

WORKING DRAFT

Operational Parameters

CW Agents Decontaminated	Not specified
BW Agents Decontaminated	Not specified
High Hazard TIMs Decontaminated	Not specified
Medium Hazard TIMs Decontaminated	Not specified
Low Hazard TIMs Decontaminated	Not specified
Decontaminant Solutions	Not specified
Capacity/Throughput	Decontaminates 10 vehicles/hour
Set-up Time	Not specified

Physical Parameters

Size	41.66 L x 8.20 W x 11.48 H (ft)
Weight	59400 lb
Power Requirements	Not specified

Logistical Parameters

Consumables Required	Decontaminant, fuel
Maintenance Repairs Required	Yes (monthly)
Shelf Life	10 yr to 20 yr dependent on use
Transportability	Requires tractor/rig to move to decontamination site; system is stand-alone trailer mounted
Durability	Built to military specifications
Environmental Conditions	-40 °F to 122 °F (operating temperature)
Environmental Considerations	Practically chemical free decontamination using hot air and gases
Resources	2 person crew
Unit Cost	Not specified
Maintenance Cost	Not specified
Warranty	Not specified

Special Requirements

Operator Skills Required	Heavy equipment operator
Operator Training Required	7 d of training is required to operate this system
Training Available	Yes, on site
Manuals Available	User manual
Support Equipment	Towing vehicle to transport trailer to decontamination site
Testing Information	Test data available upon request
Applicable Regulations	Not specified

WORKING DRAFT

General

Equipment Name

ID# 40

Karcher DECOCONTAIN 3000 Decontamination System



Decontamination Process

Physical (removes contaminant) and/or Chemical (neutralizes contaminant)

Applications

Personnel

Yes

Equipment

Yes

Infrastructure

Yes

Application Notes

The DECOCONTAIN 3000 is similar to the DECOCONTAIN 1500 and is also designed to decontaminate skin and personal equipment, exterior equipment, and large areas against both biological and chemical agents. The DECOCONTAIN 3000 employs chemical (primary) and mechanical (secondary) technologies and disperses microemulsions, water, and other decontaminants at high pressures. It was designed for deployment at battalion level or higher and forms the technical basis for the setting-up of a decontamination site. Material decontamination is conducted in 3 steps: prewash, main treatment, and post-treatment. A number of separate decontamination modules (i.e., Karcher MPS 3200, C8-DADS, and MPDS) are housed in the Decocontain 3000 in order to carry out thorough decontamination. During pre-treatment, tanks, vehicles, and other equipment are cleansed of heavy soiling which contains contamination using high pressure (55 bar) cold water. During main treatment, the C8 DADS module is used. The detoxification of chemical agents is accomplished using the Karcher detoxification emulsion TDE 202. Personnel decontamination is achieved using a two-step, pulsating shower procedure. Detoxification and disinfection of clothing and equipment is carried out using hot steam. Moreover, terrain decontamination can be achieved using an aqueous detoxification solution. Terrain decontamination may require employing additional technologies, such as oxidation, aqueous strong bases, semi-aqueous/nonaqueous, and solvent.

Availability

Commercially available

Current User

Federal German Armed Forces

WORKING DRAFT

Manufacturer

KARCHER
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Source

Wide Area Decon: CB Decontamination Technologies, Equipment,
and Projects, 22 March 1999 (U.S. Joint Service Material Group)

Operational Parameters

CW Agents Decontaminated

GB, VX, HD

BW Agents Decontaminated

All

High Hazard TIMs Decontaminated

Not specified

Medium Hazard TIMs Decontaminated

Not specified

Low Hazard TIMs Decontaminated

Not specified

Decontaminant Solutions

Water and other decontaminants

Capacity/Throughput

Decontaminates 12 to 16 vehicles/hour, 15 to 20 sets of
clothing/hour, 107636 ft² of terrain/hour, and 120 persons/hour

Set-up Time

Not specified

Physical Parameters

Size

19.87 L x 8.00 W x 8.00 H (ft)

Weight

25300 lb

Power Requirements

On board power supply

Logistical Parameters

Consumables Required

Decontaminant

Maintenance Repairs Required

Yes (monthly)

Shelf Life

Indefinite

Transportability

Mobile decontamination unit

Durability

Built to military specifications

Environmental Conditions

-40 °F to 122 °F (operating temperature)

Environmental Considerations

Not specified

Resources

2 person crew; and truck capable of moving container system.

WORKING DRAFT

Unit Cost \$600K, dependent on options

Maintenance Cost Not specified

Warranty Not specified

Special Requirements

Operator Skills Required Advanced operator skills required

Operator Training Required 5 d of training is required to operate this system

Training Available Yes, on site

Manuals Available User manual

Support Equipment Support vehicle to transport as container load.

Testing Information Test data available upon request

Applicable Regulations Not specified

WORKING DRAFT

General

Equipment Name

Karcher Decontamination Trailer

ID# 41

Picture Not Available

Decontamination Process

Physical (removes contaminant) and Chemical (neutralizes contaminant)

Applications

Personnel

Equipment

Infrastructure

Yes

Yes

No

Application Notes

The Decontamination Trailer is a mobile decontamination system. The system uses a high-pressure spray of water in the prewash and a high-pressure decontamination emulsion for main treatment. The trailer consists of two subsystems: the trailer and a removable platform. The trailer is designed for the decontamination of both equipment, exterior and skin, and personal equipment, while the platform is used primarily for the decontamination of equipment exteriors. The trailer-mounted subsystem consists of three modules; a cold-water high-pressure unit for the prewash, a decontamination emulsion generator for the main treatment, and a steam generator for the post-treatment with hot steam. The trailer is also equipped with a shower unit and a tent for the decontamination of skin and personal equipment. The platform subsystem is comprised of two modules: a decontamination emulsion generator for the main treatment and a steam generator. The steam generator sprays cold water for the prewash and steam for post-treatment. Water is stored in a 1000 L tank to ensure immediate start-up.

Availability

Commercially available

Current User

In service within Europe

Manufacturer

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WORKING DRAFT

Source

Wide Area Decon: CB Decontamination Technologies, Equipment, and Projects, 22 March 1999 (U.S. Joint Service Material Group)

Operational Parameters

CW Agents Decontaminated

Known theater agents

BW Agents Decontaminated

Known theater agents

High Hazard TIMs

Not specified

Decontaminated

Medium Hazard TIMs

Not specified

Decontaminated

Low Hazard TIMs

Not specified

Decontaminated

Decontaminant Solutions

Not specified

Capacity/Throughput

Not specified

Set-up Time

Not specified

Physical Parameters

Size

21.32 L x 7.54 W x 8.53 H (ft)

Weight

11000 lb

Power Requirements

Not specified

Logistical Parameters

Consumables Required

Decontaminant, fuel

Maintenance Repairs Required

Not specified

Shelf Life

Not specified

Transportability

Mobile decontamination unit requires heavy transport

Durability

Built to military specifications

Environmental Conditions

All operating climates

Environmental Considerations

Not specified

Resources

Not specified

Unit Cost

\$26K

Maintenance Cost

Not specified

Warranty

Not specified

Special Requirements

Operator Skills Required

Basic mechanical skills

Operator Training Required

72 h

Training Available

Yes, on site

Manuals Available

Training manuals

Support Equipment

Light transport vehicle

Testing Information

Information not available

Applicable Regulations

Not specified

WORKING DRAFT

General

Equipment Name

ID# 42

Karcher SCS 1800 DE Decontamination System



Decontamination Process

Physical (removes contaminant) and Chemical (neutralizes contaminant)

Applications

Personnel

Yes

Equipment

Yes

Infrastructure

No

Application Notes

The SCS 1800 DE decontamination system is designed to decontaminate skin, personal equipment, and exterior equipment (i.e., tracked and wheeled vehicles, aircraft). The SCS 1800 DE is a high-performance module, which employs mechanical technology. The SCS 1800 DE dispenses decontaminants, warm water, and other chemicals for decontamination. Depending on which decontaminants are utilized, the system may also employ either mechanical or chemical technologies. The system output can be varied from 300 L/h to 1800 L/h with a pressure range of 20 to 110 bar and is powered by a four-stroke diesel engine.

Availability

Commercially available

Current User

In service within Europe

Manufacturer

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Source

Wide Area Decon: CB Decontamination Technologies, Equipment, and Projects, 22 March 1999 (U.S. Joint Service Material Group)

WORKING DRAFT

Operational Parameters

CW Agents Decontaminated	GB, VX, HD
BW Agents Decontaminated	All
High Hazard TIMs Decontaminated	Not specified
Medium Hazard TIMs Decontaminated	Not specified
Low Hazard TIMs Decontaminated	Not specified
Decontaminant Solutions	Water, TDE 202 (detoxification emulsion)
Capacity/Throughput	Dispenses 300 L to 1800 L of decontaminant/hour
Set-up Time	Not specified

Physical Parameters

Size	3.60 L x 2.79 W x 3.40 H (ft)
Weight	902 lb
Power Requirements	Four-stroke diesel engine

Logistical Parameters

Consumables Required	Decontaminant, water
Maintenance Repairs Required	Monthly test
Shelf Life	Not specified
Transportability	Light transport vehicle
Durability	Built to military specifications
Environmental Conditions	All operating climates
Environmental Considerations	Protect from freezing
Resources	One person to operate each module
Unit Cost	Not specified
Maintenance Cost	Not specified
Warranty	Not specified

Special Requirements

Operator Skills Required	Basic operator skills
Operator Training Required	8 h
Training Available	Yes, on site
Manuals Available	Training manuals
Support Equipment	Light transport vehicle
Testing Information	Information not available
Applicable Regulations	Not specified

WORKING DRAFT

General

Equipment Name

ID# 43

Karcher Decojet Decontamination System



Decontamination Process

Physical (removes contaminant) and Chemical (neutralizes contaminant)

Applications

Personnel

Yes

Equipment

Yes

Infrastructure

No

Application Notes

The Decojet Decontamination system is used to decontaminate skin and personal equipment. The Decojet employs both mechanical and chemical technologies to decontaminate items by disseminating both water and mixtures of decontamination solutions at high-pressures onto contaminated surfaces. The system is equipped with a 435 L water tank with a run-back pipe that preheats the water in the tank. An additional 200 L water tank is available along with an injector system for mixing and applying decontamination solutions. The system also contains a two-stage personnel shower with an injection system in order to allow the addition of decontaminants to the water jets. The Decojet is used as a quick reaction first aid decontamination system close to the front line or as a company level self-decontamination measure.

Availability

Commercially available

Current User

In service with France and various countries in the Middle East and Asia

Manufacturer

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WORKING DRAFT

Source

Wide Area Decon: CB Decontamination Technologies, Equipment, and Projects, 22 March 1999 (U.S. Joint Service Material Group)

Operational Parameters

CW Agents Decontaminated	Not specified
BW Agents Decontaminated	Not specified
High Hazard TIMs Decontaminated	Not specified
Medium Hazard TIMs Decontaminated	Not specified
Low Hazard TIMs Decontaminated	Not specified
Decontaminant Solutions	Not specified
Capacity/Throughput	Not specified
Set-up Time	Not specified

Physical Parameters

Size	Not specified
Weight	2321 lb
Power Requirements	Not specified

Logistical Parameters

Consumables Required	Decontamination agents, water
Maintenance Repairs Required	Not specified
Shelf Life	Not specified
Transportability	Light transport vehicle
Durability	Built to military specifications
Environmental Conditions	All climates
Environmental Considerations	Protect from freezing
Resources	Not specified
Unit Cost	Not specified
Maintenance Cost	Not specified
Warranty	Not specified

Special Requirements

Operator Skills Required	Basic operator skills
Operator Training Required	8 h
Training Available	Yes, on site
Manuals Available	Training manuals
Support Equipment	Not specified
Testing Information	Information not available
Applicable Regulations	Not specified

WORKING DRAFT

General

Equipment Name

ID# 44

Karcher DECOCONTAIN 1500 Decontamination System



Decontamination Process

Physical (removes contaminant) and Chemical (neutralizes contaminant)

Applications

Personnel

Yes

Equipment

Yes

Infrastructure

Yes

Application Notes

The DECOCONTAIN 1500 is a compact decontamination system designed to decontaminate skin and personal equipment, exterior equipment, and large areas against both biological and chemical agents. The DECOCONTAIN 1500 disperses microemulsions, water, and other decontaminants at high pressures. The system is constructed as a main component for NBC-defense troops and is the basis for the setting-up of a decontamination site. Material decontamination is conducted in 3 steps; prewash, main treatment, and post-treatment. A number of separate decontamination modules (i.e., Karcher MPS 3200, C8-DADS, and MPDS) are housed in the DECOCONTAIN 1500 in order to perform decontamination. During pretreatment, tanks, vehicles, and other equipment are cleansed of heavy soiling which contains contamination using the high pressure (55 bar) and cold water of the MPS 3200. During main treatment, the C8 DADS module is used. Decontamination is accomplished using the Karcher detoxification emulsion, TDE 202. Personnel decontamination is achieved using a two-step, pulsating shower procedure. Detoxification and disinfection of clothing and equipment is carried out using steam. Terrain decontamination can be achieved using an aqueous detoxification solution. Terrain decontamination may require employing additional technologies, such as oxidation, aqueous strong bases, semi-aqueous/nonaqueous, and solvent. The DECOCONTAIN 1500 is 5.0 m long, 2.2 m wide, and 2.2 m high. It weighs 4900 kg and can operate in a temperature range from -20 °C to +50 °C. The system is equipped with a 1500 L tank and can decontaminate 6 to 8 tanks or 12 to 16 vehicles in 1 h, 15 to 20 sets of clothing in 1 h, and 10000 m² of terrain in 1 h.

Availability

Commercially available

Current User

In service with the Hungarian Armed Forces

WORKING DRAFT

Manufacturer

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Source

Wide Area Decon: CB Decontamination Technologies, Equipment,
and Projects, 22 March 1999 (U.S. Joint Service Material Group)

Operational Parameters

CW Agents Decontaminated

G agents, VX, D

BW Agents Decontaminated

All

High Hazard TIMs

Not specified

Decontaminated

Medium Hazard TIMs

Not specified

Decontaminated

Low Hazard TIMs

Not specified

Decontaminated

Decontaminant Solutions

C-8 emulsion

Capacity/Throughput

Decontaminates 12 to 16 vehicles/hour, 15 to 20 sets of
clothing/hour, 107636 ft² of terrain/hour, and 120 persons/hour

Set-up Time

Not specified

Physical Parameters

Size

16.40 L x 7.21 W x 7.21 H (ft)

Weight

10780 lb

Power Requirements

Not specified

Logistical Parameters

Consumables Required

Decontaminant, fuel, water

Maintenance Repairs Required

Monthly testing

Shelf Life

Not specified

Transportability

Mobile decontamination unit

Durability

Not specified

Environmental Conditions

-40 °F to 122 °F (operating temperature)

Environmental Considerations

Not specified

WORKING DRAFT

Resources	Not specified
Unit Cost	Not specified
Maintenance Cost	Not specified
Warranty	Not specified

Special Requirements

Operator Skills Required	Advanced technical skills
Operator Training Required	40 h
Training Available	Yes, on site
Manuals Available	Training manuals
Support Equipment	Medium transport
Testing Information	Information not available
Applicable Regulations	Not specified

WORKING DRAFT

General

Equipment Name

ID# 45

Karcher Mobile Field Laundry CFL 60



Decontamination Process

Physical (removes contaminant) and Thermal (removes contaminant)

Applications

Personnel

No

Equipment

Yes

Infrastructure

No

Application Notes

The CFL 60 is a mobile field laundry system used to decontaminate personal equipment against both chemical and biological agents. The system is manufactured in Germany by Alfred Karcher GmbH & Company and is currently in service with the German and Norwegian armed forces. The system's primary function is to disinfect and launder contaminated garments. The CFL 60 employs both chemical and mechanical technologies to decontaminate items thoroughly. The system is self-sufficient and requires only water and power, which is supplied by water reserves and an integral 125 kVA electrical generator, respectively. The CFL 60 is equipped with folding worktables, mangles, ironing boards, and handling containers. The CFL is a preprogrammed, push button system for easy operation. Washing agents and decontaminant solutions are added automatically. The CFL 60 system contains an air conditioning unit for hot climates and an auxiliary heating system for cold climates, thus allowing the system to operate in all temperatures.

Availability

Commercially available

Current User

In service with German and Norwegian Forces

Manufacturer

KARCHER

Alfred Karcher GmbH & Company

Alfred-Karcher-Strasse 28-40

Winnenden, Germany D-71364

+49-7195-142262 (Tel)

+49-7195-142780 (Fax)

email: hans-joachim.toepfer@de.kaercher.com

U.S. Agent: Life Safety Systems

343 Soquel Avenue, Suite 317

Santa Cruz, CA 95062

POC: Bill Conklin

831-728-9090 (Tel)

831-429-2224 (Tel)

info@lifesafetysys.com

WORKING DRAFT

Source

Wide Area Decon: CB Decontamination Technologies, Equipment, and Projects, 22 March 1999 (U.S. Joint Service Material Group)

Operational Parameters

CW Agents Decontaminated

Not specified

BW Agents Decontaminated

Not specified

High Hazard TIMs Decontaminated

Not specified

Medium Hazard TIMs Decontaminated

Not specified

Low Hazard TIMs Decontaminated

Not specified

Decontaminant Solutions

Not specified

Capacity/Throughput

Capable of cleaning 60 kg of personal equipment per hour

Set-up Time

Not specified

Physical Parameters

Size

Not specified

Weight

22000 lb

Power Requirements

125 kVA electrical generator

Logistical Parameters

Consumables Required

Decontaminant, water

Maintenance Repairs Required

Minimal

Shelf Life

Not specified

Transportability

Mobile decontamination unit requires medium transport vehicle

Durability

Not specified

Environmental Conditions

Operates in all environments

Environmental Considerations

Not specified

Resources

Not specified

Unit Cost

Not specified

Maintenance Cost

Not specified

Warranty

Not specified

Special Requirements

Operator Skills Required

Basic operator skills

Operator Training Required

8 h

Training Available

Yes, on site

Manuals Available

Not specified

Support Equipment

Water resource

Testing Information

Information not available

Applicable Regulations

Not specified

WORKING DRAFT

General

Equipment Name

Karcher C8-DADS Direct Application Decontamination System

ID# 46



Decontamination Process

Physical (removes contaminant) or Chemical (neutralizes contaminant)

Applications

Personnel

No

Equipment

Yes

Infrastructure

Yes

Application Notes

The C8-DADS is designed for the decontamination of exterior equipment and large areas. The system is in service with Australia, Austria, Egypt, France, Germany, Taiwan, Thailand, and NATO armed forces. Optimum detoxification is accomplished using the Munster (C8) emulsion after cleaning the surface with high-pressure cold water. The C8-DADS uses an aqueous C8 solution to decontaminate chemical and biological warfare agents. To decontaminate terrain, vehicle mounted spray nozzles disperse the decontamination solutions. The basic module can mix up to 254 kg of C8 with water (volume of 1300 L) that can be increased with additional pumping systems. The system may be carried on a truck with the components mounted in a tubular steel frame.

Availability

Commercially available

Current User

In service with Australia, Austria, Egypt, France, Germany, Taiwan, Thailand, NATO headquarters, and nations in Asia

Manufacturer

KARCHER

Alfred Karcher GmbH & Company

Alfred-Karcher-Strasse 28-40

Winnenden, Germany D-71364

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Source

Wide Area Decon: CB Decontamination Technologies, Equipment, and Projects, 22 March 1999 (U.S. Joint Service Material Group)

WORKING DRAFT

Operational Parameters

CW Agents Decontaminated	Known theater agents
BW Agents Decontaminated	Known theater agents
High Hazard TIMs Decontaminated	Not specified
Medium Hazard TIMs Decontaminated	Not specified
Low Hazard TIMs Decontaminated	Not specified
Decontaminant Solutions	User selected
Capacity/Throughput	Dependent on operation required
Set-up Time	Not specified

Physical Parameters

Size	3.14 L x 2.78 W (ft)
Weight	704 lb
Power Requirements	Four-stroke diesel engine

Logistical Parameters

Consumables Required	Decontaminant, water
Maintenance Repairs Required	Monthly test
Shelf Life	Not specified
Transportability	Units require light transport vehicle
Durability	Built to military specifications
Environmental Conditions	Operates in all environments
Environmental Considerations	Protect from freezing
Resources	Not specified
Unit Cost	\$16K
Maintenance Cost	Not specified
Warranty	Not specified

Special Requirements

Operator Skills Required	Basic technical skills
Operator Training Required	8 h
Training Available	Yes, on site
Manuals Available	Training manuals
Support Equipment	Light transport vehicle
Testing Information	Information not available
Applicable Regulations	Not specified

WORKING DRAFT

General

Equipment Name

ID# 47

Karcher Decont Tent



Decontamination Process

Physical (removes contaminant) and Thermal (removes contaminant)

Applications

Personnel

Yes

Equipment

Yes

Infrastructure

No

Application Notes

The Decont Tent is designed for various decontamination tasks. The tent employs low-temperature thermal technology coupled with mechanical technology. The tent is used to shelter contaminated victims from inclement weather during decontamination procedures. Saturated steam or hot gas fed into the tent, via either the Karcher Multipurpose Decontamination System or a similar module, can be used to decontaminate personal clothing and equipment. The tent tubular frame is equipped with a safety overflow valve. The tent tarpaulin has a watertight inner lining with a canvas groundsheet and is constructed of chemical agent resistant material. The tent is equipped with two hose connections to provide wastewater disposal. For stability, four ground loops and guy lines fasten the tent securely.

Availability

Commercially available

Current User

Federal German Armed Forces

Manufacturer

KARCHER

Alfred Karcher Gmbh & Company

Alfred-Karcher-Strasse 28-40

Winnenden, Germany D-71364

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info@lifesafetysys.com

Source

Wide Area Decon: CB Decontamination Technologies, Equipment, and Projects, 22 March 1999 (U.S. Joint Service Material Group)

WORKING DRAFT

Operational Parameters

CW Agents Decontaminated	Known theater agents
BW Agents Decontaminated	Known theater agents
High Hazard TIMs Decontaminated	Not specified
Medium Hazard TIMs Decontaminated	Not specified
Low Hazard TIMs Decontaminated	Not specified
Decontaminant Solutions	Not specified
Capacity/Throughput	Not specified
Set-up Time	5 min

Physical Parameters

Size	6.56 L x 6.56 W x 7.05 H (ft)
Weight	95 lb
Power Requirements	None

Logistical Parameters

Consumables Required	Decontaminant, water
Maintenance Repairs Required	Quarterly inspection
Shelf Life	10 yr
Transportability	Light transport vehicle
Durability	Constructed of chemical agent resistant material
Environmental Conditions	The temperature resistance of the outside of the tent ranges from -22 °F to +176 °F, while the internal temperature resistance ranges from -22 °F to +284 °F.
Environmental Considerations	The tent is equipped with two hose connections to provide wastewater disposal.
Resources	2 person crew to erect
Unit Cost	\$7.6K
Maintenance Cost	Not specified
Warranty	Not specified

Special Requirements

Operator Skills Required	Not specified
Operator Training Required	8 h of training is required to operate this system
Training Available	Yes, on site
Manuals Available	User manual
Support Equipment	Karcher multipurpose decontamination system
Testing Information	Test data available upon request
Applicable Regulations	Not specified